15

WO 2005/122892

15

20

**CLAIMS** 

PCT/GB2005/001920

- A metabolic rate measuring apparatus comprising means to measure a reference metabolic rate of a user from at least one breath of the user, means to measure metabolic rate from a subsequent breath of a user, means to indicate a deviation from the reference rate in a breath and prevent measuring of subsequent breaths, and means for a user to override the measurement prevention means to enable measurement of metabolic rate from breaths which deviate from the reference rate.
  - 2. An apparatus as claimed in Claim 1 wherein the means to measure a reference metabolic rate comprises an oxygen sensor and/or a carbon dioxide sensor, operatively connected to an electronic calculation means.
  - 3. An apparatus as claimed in Claim 2 wherein the oxygen sensor and/or carbon dioxide sensor is connected to a flow meter to measure the volume of inhaled and/or exhaled breaths.
  - 4. An apparatus as claimed in any one of Claims 1 to 3 wherein the means to measure a reference metabolic rate is connected to a data storage means, arranged in use to store the reference metabolic rate data.
- 25 5. An apparatus as claimed in any preceding claim wherein the means to measure the reference metabolic rate is the same as the means to measure metabolic rate from the subsequent breath of a user.

WO 2005/122892

16

PCT/GB2005/001920

- 6. An apparatus as claimed in any preceding claim wherein the means to measure the reference metabolic rate comprises means to measure a reference range of metabolic rates.
- 5 7. An apparatus as claimed in any preceding claim wherein the reference metabolic rate is measured as an average from a plurality of breaths.
- 8. An apparatus as claimed in any preceding claim wherein the means to indicate a deviation from the reference metabolic rate comprises a visual indicator selected from a display screen, an LED, a text display, a numeric display, a warning light or any mixture thereof.
- 9. An apparatus as claimed in any preceding claim wherein the means to prevent measurement of subsequent breaths when a deviation from the reference metabolic rate is detected, comprises means to prevent operation of the means to measure subsequent breaths.
- 10. An apparatus as claimed in Claim 9 wherein the measurement prevention means effects non-recordal of subsequent breaths, until a breath is measured which substantially corresponds to the reference metabolic rate.
- 11. An apparatus as claimed in any preceding claim wherein
  the means to prevent measurement of subsequent breaths
  effects de-activation of the means to measure
  subsequent breaths.
  - 12. An apparatus as claimed in any one of Claims 9 to 11 when dependent on Claim 2, wherein the means to record

WO 2005/122892 PCT/GB2005/001920

subsequent breaths comprises an oxygen sensor and/or a carbon dioxide sensor which is de-activated by the measurement prevention means.

- 13. An apparatus as claimed in any preceding claim wherein the means to override the measurement prevention means comprises means to enable operation of the means to record subsequent breaths.
- 14. An apparatus as claimed in any preceding claim wherein the means to override the measurement prevention means comprises an actuator, operable by a user, which deactivates the measurement prevention means when operated by a user.